ABSTRACT OF THE DISCLOSURE

A method and apparatus for detecting an improperly installed auxiliary child seat of the type that is secured in a motor vehicle by the seatbelt, and providing an alert to a vehicle operator in the case of improper installation. A seat occupancy sensor, a seatbelt buckle condition sensor, and a seatbelt tension sensor provides electrical signals to a child seat detection module, which determines that an improper installation condition exists if the auxiliary child seat is present and the seatbelt buckle is unfastened. The child seat detection module further determines an improper installation condition if the auxiliary child seat is present, the seatbelt buckle is fastened, and the seatbelt tautness is not within an acceptable range. If an improper installation condition is detected, the child seat detection module triggers an alerting device, such as a warning light on the instrument panel or audible chime. The seat occupancy sensor may a bladder-type weight sensor, or a pressure pattern sensor that is able to detect a child seat based on the weight distribution over the area of the seat. The child seat detection module includes a memory unit containing information for all auxiliary child seats that are compatible with the vehicle. A user interface allows the vehicle operator to input the type of seat installed in the vehicle, the weight of the child to be carried, and other pertinent information if necessary, and the child seat detection module calculates the range of acceptable tension values or looks up the correct values in a saved table.